# Software Test Plan (STP) - DrameTune

## **1.Introduction**

This Software Test Plan outlines the testing strategy for the **DramaTune** application, a web-based system that matches and merges music tracks to uploaded dramatic video scenes. The objective is to ensure correct functioning of video upload, music recommendation, merging, and download features.

## **2.Test Items**

* Video Upload and Display Module (Frontend/Backend)
* Music Recommendation Engine (ML Model & API)
* Audio/Video Merge and Download Feature

## **3.Features to be Tested**

* Successful upload of video files via UI
* Accurate suggestion of top 3 music tracks for each uploaded video
* Playback and pausing of video and suggested tracks
* Merging selected music with the uploaded video
* Downloading the merged video file
* UI layout and responsiveness across major browsers

## **4. Features Not to be Tested**

* User authentication or profile management (not in scope)
* Advanced music generation or effects (future version)

## **5. Testing Strategy**

* **Unit Testing:** Core backend functions (rhythm extraction, model prediction)
* **Integration Testing:** Frontend-backend API interactions (upload, merge, download)
* **System Testing:** Complete user flow (upload → suggest → play → merge → download)
* **Acceptance Testing:** Manual end-to-end tests on main user stories and edge cases

## **6. Test Environment**

* Backend: Python Flask server (localhost)
* Frontend: React web app (localhost)
* Music/Video Files: Local test dataset (mp4, mp3)
* Browsers: Chrome and Firefox (latest)

## **7. Responsibilities**

Maayan: Backend Testing Lead

Kim: Frontend Testing Lead

Both: Frontend Testing Lead

## **8. Schedule**

* Unit Testing: 26–27 May 2025
* Integration Testing: 28–29 May 2025
* System/Acceptance Testing: 30–31 May 2025

## **9. Risks and Contingencies**

* Possible errors in video/audio merging (contingency: provide error messages and manual fallback)
* Library or dependency compatibility issues (contingency: use compatible versions, document any workarounds)
* Large file performance issues (contingency: restrict file size and provide user guidance)